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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/090,315	06/04/1998	HOWARD E. RHODES	M4065.059/P0	3755

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EXAMINER

GEBREMARIAM, SAMUEL A

ART UNIT PAPER NUMBER

2811

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/090,315

Applicant(s)

RHODES ET AL.

Examiner

Samuel A. Gebremariam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 7-16, 28, 29 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 7-16, 28, 29 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments, filed on 2/25/05, with respect to the final rejection have been fully considered and are persuasive. The finality of the last office action has been withdrawn. A new office action on the claims amended on 8/04/04 follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claim 7-8, 2-4, 10, 28-29, 31 and 32 rejected under 35 U.S.C. 102(e) as being anticipated by Ogawa, US patent No. US 6,291,811.

Regarding claim 7, Ogawa teaches an imaging device (figs. 15 and 16) comprising: a frame (91a) having a support structure (91c), a semiconductor imaging chip (90) supported by the support structure (91c); the semiconductor imaging chip having an array of photosensitive elements 90a, fig. 15) configured to receive and

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generate a corresponding image signal (inherent property of imaging device), a package (95c) encapsulating the frame (91d), support structure (91c), and semiconductor imaging chip (90) in a transparent material, the transparent material covering the chip, the photosensitive elements receiving the image through the transparent material (refer to fig. 16); and an optical light transmitting device (95d) supported in line with an image being received by the photosensitive elements (90a) of the semiconductor imaging chip.

Regarding claim 2, Ogawa teaches the entire claimed structure of claim 7 above including the photosensitive elements are arranged in a two dimensional array (refer to fig. 13).

Regarding claim 3, Ogawa teaches the entire claimed structure of claim 7 above including the transparent material (95c) includes molded epoxy (transparent synthetic resin) resin.

The limitation that the transparent material is injection-molded epoxy is not given patentable weight, because it is considered a product-by-process claim. “[E]ven though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 4, Ogawa teaches substantially the entire claimed structure of claim 7 above including leads (91d) connected to the semiconductor material, the leads being partially encapsulated in the transparent material (95c).

Regarding claim 8, Ogawa teaches the entire claimed structure of claim 7 above including the optical light-transmitting device (95d) is formed of the transparent material (95c).

Regarding claim 10, Ogawa teaches the entire claimed structure of claim 7 above including a color filter array into the transparent material (refer to col. 12, lines 25-29).

Regarding claim 28, Ogawa teaches (figs. 15 and 16) an imaging device, comprising: a housing (95c) having a cavity (region where 90 is situated) and a bottom surface (bottom surface of 95c); a semiconductor imaging chip (90) located within the cavity of the housing, the semiconductor imaging chip having an array of photosensitive elements 90a, fig. 15) configured to receive and generate a corresponding image signal (operating characteristics of an imaging device), the photosensitive elements being covered by a transparent cover (95c); the semiconductor imaging chip (90) being encapsulated in a transparent material (95c, transparent resin), wherein the transparent material has an uppermost surface substantially planar to an uppermost surface of the housing (refer to fig. 16, where 95b bends on both sides); and an optical light transmitting device (95d) supported in line with an image being received by the photosensitive elements (90a).

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Regarding claim 29, Ogawa teaches the entire claimed structure of claim 28 above including the transparent cover includes color filter (refer to col. 12, lines 25-29).

Regarding claim 31, Ogawa teaches (figs. 15 and 15) the entire claimed structure of claim 28 above including the housing is formed of molded plastic (95, transparent resin).

Regarding claim 32, Ogawa teaches the entire claimed structure of claim 7 above including the optical light-transmitting device (95d) is a lens (fig. 16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Elabd et al., US patent No. 4,663,656.

Regarding claim 11, Ogawa teaches substantially the entire claimed structure of claim 7 above including (figs. 15 and 16) an imaging device including a semiconductor device including an array of photosensitive elements, the semiconductor device being mounted on a frame (91a), the frame having a support structure (91c), the semiconductor device receiving the image and generate corresponding signal (inherent property of an imaging device), the frame (91a), the support structure (91c) and the semiconductor device (90) is encapsulated in a package (95c) for protecting and

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supporting the semiconductor device, the package being formed of a transparent material (transparent resin).

Ogawa does not teach a system for transmitting an image source, the image source being arranged to transmit the image simultaneously onto each of a plurality of imaging devices.

Elabd teaches (fig. 1) an imaging system for transmitting an image source (the dashed lines in fig 1), the image source (7) being arranged to transmit the image simultaneously onto each of a plurality of imaging devices (imager 1 and imager 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the image transmitting system to transmit the image simultaneously onto each of a plurality of imaging devices taught by Elabd in the structure of Ogawa in order to improve color discrimination property of the device.

The limitation that the transparent plastic material is injection-molded resin is not given patentable weight, because it is considered a product-by-process claim. “[E]ven though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

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Regarding claim 12, Ogawa teaches substantially the entire claimed structure of claim 11 above including the image source includes a lens (7, Elabd, col. 6, lines 57-69).

Regarding claim 13, Ogawa teaches substantially the entire claimed structure of claim 11 above including the imaging devices include complementary color filters (4, Elabd, fig. 1).

Regarding claim 14, Ogawa teaches substantially the entire claimed structure of claims 11 and 10 above the complementary color filters (full color, col. 13, line 64-, col. 14, line 3) are molded into the packages (refer to col. 12, lines 25-29).

Regarding claim 15, Ogawa teaches substantially the entire claimed structure of claims 11 and 13 above including the packages include red, green and blue filters (full color, col. 13, line 64-, col. 14, line 3).

Regarding claim 16, the combined structure of Ogawa teaches substantially the entire claimed structure of claim 11 above except explicitly stating that the packages include cyan, magenta and yellow filters.

Cyan, magenta and yellow colors are fundamental colors that all colors are formed from. Furthermore cyan, magenta and yellow color filters are conventional in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form color filters based on the primary colors as claimed in the structure of Ogawa in order to selectively transmit light of particular wavelength.

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6. Claims 9 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Mantell US patent No. 5,378,916.

Regarding claim 9, Ogawa teaches substantially the entire claimed structure of claim 7 above except explicitly stating that the optical light-transmitting device is a color filter being formed of the transparent material.

Mantel teaches (refer to col. 7, lines 57-69 and col. 8, lines 1-6) the possibility of combining color filters with the photosensitive regions.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a color filter structure taught by Mantel in the structure of Ogawa in order to be able to image full color images.

The limitation that the color filter is formed by color tinting is not given patentable weight, because it is considered a product-by-process claim. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 34, Ogawa teaches substantially the entire claimed structure of claim 7 above including the optical transmitting device is color filter being supported separated from the package of the transparent material (refer to col. 7, lines 57-69 and col. 8, lines 1-6, Mantell).

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7. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Chun, US patent No. 5,644,169

Regarding claim 33, Ogawa teaches substantially the entire claimed structure of claim 28 above except explicitly stating that the housing is formed of a ceramic material

Chun teaches housing for a package that uses ceramic material (col. 1, lines 36-42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ceramic housing taught by Chun in the structure of Ogawa in order to improve heat dissipation of the device.

Response to Arguments

8. Applicant's arguments filed on 8/4/2004 with respect to claims 2-4, 7-16, and 28-34 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Admassu Gebremariam whose telephone number is 703 305 1913. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (571) 272-1732. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Samuel Admassu Gebremariam
March 21, 2005



EDDIE LEE
SPE TC 2800